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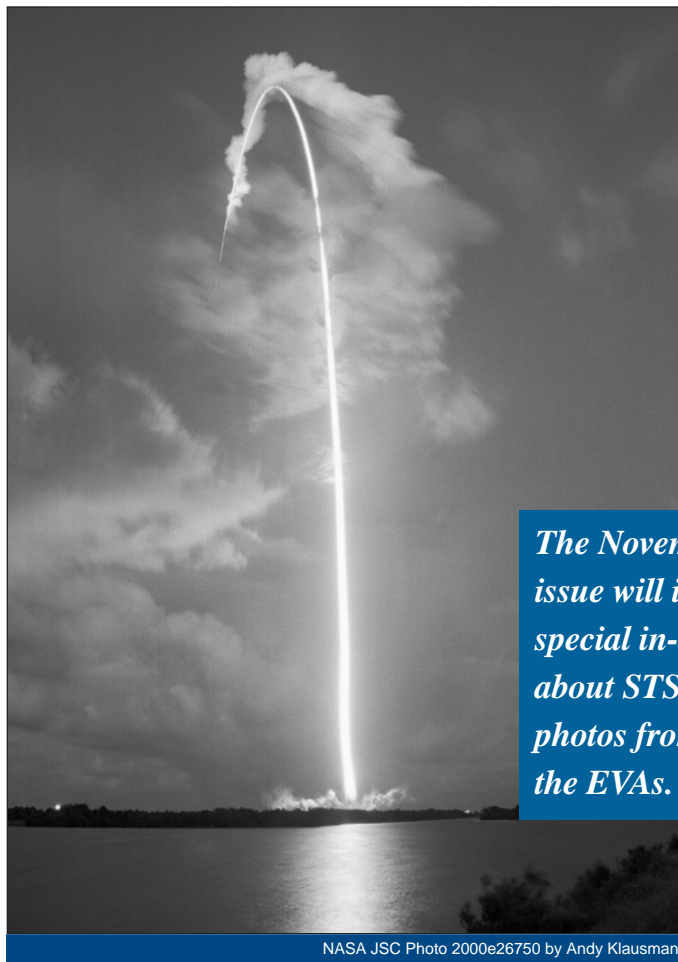
100th shuttle mission marked by EVA success

STS-92 delivers heart of station

Discovery and its seven-member American and Japanese crew lifted off Wednesday, October 11, at 6:17 p.m. Central time from Kennedy Space Center on the 100th mission in space shuttle history. The mission was earmarked not only as a milestone in shuttle success, but also representing a key flight for construction of the world's largest engineering endeavor – the International Space Station.

The STS-92 crew, including Commander Brian Duffy, Pilot Pam Melroy and Mission Specialists Leroy Chiao, Bill McArthur, Jeff Wisoff, Mike Lopez-Alegria and Koichi Wakata, were tasked to deliver the Z-1 truss, an external framework structure, and a new docking port, referred to as Pressurized Mating Adapter 3 (PMA-3) to the ISS, now orbiting at about 240 statute miles over the Earth.

The mission was highlighted by four back-to-back space walks. The bulk of EVA activity centered around ISS assembly work, including connecting umbilicals and electrical wiring to and from the new modules. But on the final EVA, the space walkers were able to take part in a special demonstration of the crew rescue backpack, Simplified Aid for EVA Rescue (SAFER).



The November 17 issue will include a special in-depth story about STS-92 and photos from the EVAs.

The SAFER uses compressed nitrogen gas to propel the astronauts back to the vehicle should they ever stray. Attached to the shuttle via a long, slack tether, each astronaut took a turn using the SAFER to execute a controlled, 50-foot flight from the Z1 to the fore section of the orbiter's payload bay. Each time, the other astronaut followed along the flight path at the end of *Discovery's* robotic arm.

At the conclusion of the final EVA, the four crewmembers had logged 27 hours and 19 minutes of space walking during the mission, bringing the total for the ISS assembly to 69 hours and 34 minutes.

"We went four-for-four as far as these mission EVAs were concerned," said STS-92 EVA Lead Daryl Schuck. "We got everything done that we set out to do in regard to station assembly.... This is just an example of what we have ahead. We got the job done, but we are continuing to learn lessons and get smarter about how to do these things."

According to STS-92 Lead Flight Director Chuck Shaw, missions such as this provide the stepping-stones toward a permanent human presence in space.

"STS-92/ISS Mission 3A opens the next chapter in the construction of the International Space Station," said Shaw. "This mission has built upon the foundation laid by previous missions, and was a glimpse into future missions. The future is building and growing right before our very eyes!" ■

Four flight crews assigned for 2001 missions

A cadre of 20 astronauts and one Russian cosmonaut has been assigned to four space shuttle missions targeted for launches in 2001.

Two of the missions, STS-100 and STS-104, will continue the on-orbit construction of the International Space Station (ISS). The third, STS-107, will be dedicated to scientific research for the U.S. and its international partners, while the fourth flight, STS-109, will conduct the fourth scheduled servicing visit to the Hubble Space Telescope.

Kent V. Rominger will lead the STS-100 mission to install the Canadian-built Space Station Remote Manipulator System (SSRMS) and attach the Raffaello Multi-Purpose Logistics Module 2 (MPLM 2) to the space station during three scheduled space walks. Also named to the crew are Pilot Jeffrey S. Ashby, Mission Specialist John L. Phillips, and Russian cosmonaut Yuri Lonchakov. Mission Specialists Scott E. Parazynski, Canadian astronaut Chris A. Hadfield, and Italian astronaut Umberto Guidoni of

the European Space Agency (ESA) were previously named to the crew.

Rominger, on his fifth trip to space, will serve as commander for a second time. He flew on STS-73 in 1995, STS-80 in 1996, STS-85 in 1997, and STS-96 in 1999. Ashby will be serving as pilot for the second time following his first flight on STS-93 in 1999. Parazynski will be making his fourth flight, having flown on STS-66 in 1994, STS-86 in 1997, and STS-95 in 1998. Hadfield flew previously on STS-74 in 1995, and Guidoni will be returning to space, having flown as a payload specialist on STS-75 in 1996. Phillips, a member of the 1996 astronaut class, will be making his first space flight on STS-100. Cosmonaut Lonchakov also will be making his first flight into space.

The STS-104 mission will feature three space walks to continue ISS assembly and will deliver and install the space station's airlock. First-time Commander Steven W. Lindsey and Pilot Charles O. Hobbaugh will be joined by mission specialists Janet L. Kavandi,

Michael L. Gernhardt, and James F. Reilly.

Lindsey previously flew as pilot on STS-87 in 1997 and STS-95 in 1998. Hobbaugh, selected as an astronaut candidate in 1996, will be making his first flight into space. STS-104 will mark Kavandi's third journey into space, after STS-91 in 1998 and STS-99 earlier this year. Gernhardt is a veteran of three previous space shuttle missions, having flown on STS-69 in 1995, and STS-83 and STS-94 in 1997, while Reilly has one previous space flight, STS-89 in 1998, to his credit.

Four mission specialists and one payload specialist have been assigned to the STS-107 mission, undertaking a series of U.S., international and commercial experiments. Michael P. Anderson and Kalpana Chawla will be joined by Mission Specialists David M. Brown and Laurel B. Clark, both members of the astronaut class of 1996 and first-time fliers. Payload Specialist Ilan Ramon will round out the crew. Anderson and Chawla both have one

previous space flight to their credit, STS-89 in 1998 and STS-87 in 1997, respectively. A commander and pilot will be named at a later date.

Four astronauts will begin training for five scheduled space walks to upgrade and service the Hubble Space Telescope during the STS-109 mission in late 2001. Three veteran astronauts, John M. Grunsfeld, James H. Newman, and Richard M. Linnehan, will be joined by Michael J. Massimino, who will be making his first space flight.

Grunsfeld has flown three times, STS-67 in 1995, STS-81 in 1997, and STS-103 in 1999 when he performed two space walks to service the Hubble Space Telescope. Newman, veteran of three space flights, STS-51 in 1993, STS-69 in 1995, and STS-88 in 1998, has conducted four previous space walks. Linnehan flew on STS-78 in 1996 and STS-90 in 1998. Massimino is a member of the 1996 astronaut class. A commander, pilot and flight engineer will be named at a later date. ■



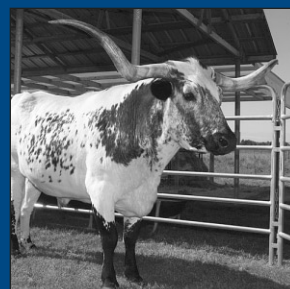
Drills prepare teams for real emergencies.

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Scientists discuss psychology of lengthy space flight.

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'Texas Twister' blows into JSC from Magnolia.

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